

## REMARKS

### Claim Rejections -35 USC s. 112 para. 1

Applicant submits that the presently amended claims are fully responsive to Examiner's rejections concerning the written description requirement. As amended, claim 1 describes the photosensitizer as being "preferentially modified to have a targeting molecule attached" and "bonded to" the surface required to exhibit antimicrobial activity. The recitation of these aspects of the present invention was previously accepted by the Examiner. Moreover, amended claim 1 no longer recites the "exclusion of ultraviolet light within the body" limitation.

As instructed by the Examiner, claim 12 has been rewritten in independent form and includes all of the features of the base and intervening claims.

With these changes, Applicant respectfully requests that the section 112, 1<sup>st</sup> paragraph rejection be withdrawn.

Briefly, as described in the amended claims, the present invention imparts antimicrobial properties to a surface by providing a topically available formulation of a photosensitizer that has been preferentially modified to have an attached targeting molecule which is selected to target and be attractive to predetermined microbes. The inventive photosensitizer is bonded to the surface required to exhibit antimicrobial activity and activated by an environmental condition.

### Claim Rejections -35 USC s. 102

1. Claims 1-10 were rejected as being anticipated by Jori, US 6,107,326 ('326).

In contrast to the present invention, '326 teaches a sterilization method that requires the article to be immersed in a photosensitizer solution. Column 6, lines 10-15. This reference also teaches that porphycenes can be incorporated within a "paint

composition” which can be used to coat the article in need of sterilization. See ‘326, column 6, lines 21-24. The reference does not disclose any further information as to the characteristics or properties of the “paint composition.” Nor does the reference teach a method for formulating porphycenes, or photosensitizers generally, into a “paint composition.” Without such teachings, it cannot be inferred that the photosensitizer disclosed in ‘326 is itself bound to the surface to be sterilized. In fact, by teaching an immersion method in the same paragraph, ‘329 implies exactly the opposite—i.e. that the sterilizing coatings of ‘329 are temporary and not intended for re-activation. See ‘326, column 6, lines 7-15.

Thus, the teachings of ‘326 are in direct contrast to the photosensitizer of the present invention, which, as recited in the presently amended claims, is bonded to the surface to be sterilized. The feature of having the photosensitizer bonded to the surface is critical to achieving the continuous or repeat activation objectives of the present invention described on page 3, Objectives and Brief Summary, lines 13- 19.

Because ‘326 does not teach or suggest a photosensitizer that is bonded to the surface or article to be irradiated, ‘326 does not anticipate nor make obvious the present invention.

2. Claims 1-5, 7 and 9-10 were rejected as being anticipated by Polony *et al.*, US 4,318,883 (‘883).

Polony *et al.* teach the use of phthalocyanine derivatives for disinfecting natural or synthetic textiles and for providing textiles with an antimicrobial finish. In contrast to the present invention, the phthalocyanine derivatives of ‘883 are not targeted to a specific microorganism. Instead, the teachings of ‘883 are specifically limited to phthalocyanines that have been derivatized to achieve the “necessary solubility in water” as required by the ‘883 sterilization process. See ‘883, column 1, lines 49-59.

Unlike the present invention, the ‘883 does not teach photosensitizers with substituents that preferentially target and are attractive to predetermined microorganisms. Because ‘883 neither suggests nor teaches derivatives that are specifically targeted or

attractive to predetermined microorganisms, '883 does not anticipate nor make obvious the invention of the present application.

3. Claims 1-2 and 5-11 were rejected as being anticipated by Bonnet WO 93/00815 ('814)

Bonnet teaches a composition and method for the light-induced sterilization of surfaces that requires the photosensitizer to be formulated within a polymer composition. See '814, page 3, lines 14-23. Further, there is nothing in '814 that teaches or suggests that the polymer composition can be preferentially selected to target or be attractive to predetermined microorganisms. As such, '814 cannot anticipate the present invention because '814 lacks the teaching or suggestion of preferentially modifying a photosensitizer to have an attached targeting molecule which is selected to target and be attractive to predetermined microorganisms. Nor does '814 alone or in combination with the other references make obvious the present invention.

With these changes and remarks, it is believed that the disclosure is now in condition for allowance and reconsideration is respectfully requested. An early and favorable response is earnestly solicited. Thank you.

Respectfully submitted,



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